

Synthesis of Current Knowledge

Subcommittee Product

Charge to Subcommittee on Synthesis of Current Knowledge

Address items 1 and 2 in Committee's FACA Charter, as follows:

- 1) review and evaluate available information on the impacts of human-generated sound on marine mammals, marine mammal populations, and other components of the marine environment, and
- 2) identify areas of general scientific agreement and areas of uncertainty or disagreement related to such impacts.

VISION FOR PRODUCT

- The goal of the product should be to serve as a tutorial document, NOT a comprehensive scientific product
- Target audience of Congress and staff, managers and decision makers (also useful and informative to judges, interest groups and other interested and involved parties)
- Identifies what topics and information need to be considered
- Translates existing information into a form that is accessible, useful and informative
- Makes summary statements regarding current knowledge: what is agreed to be known, what is uncertain, where there is disagreement.

Subcommittee Membership

- Jack Caldwell
- David Cottingham
- Gerald D'Spain
- Roger Gentry/Brandon Southall
- Bob Gisiner/Mardi Hastings
- John Hildebrand
- Jim Kendall/Lee Benner
- Rodger Melton/
Andrew Wigton
- Jim Miller
- Paul Nachtigall
- Naomi Rose
- Peter Tyack
- Staff: Erin Vos, Tara Cox, Tim Ragen, Daryl Boness

Subcommittee Process

- Met 6 times (2 or 3-day meetings)
- Presented preliminary draft at 3rd Plenary Meeting (San Francisco)
- Worked to review and respond to comments from Advisory Committee members
- Focused on achieving unbiased scientific accuracy, (no policy or management language, no interest-based spin)

Process (cont'd)

- Important Subcommittee Protocols
 1. Use of “sound” vs. “noise”
 - Use “sound” **except** when explicitly referring to *background noise, ambient noise, masking noise or band-limited noise*
 - Agreed to avoid use of term “noise” because it tends to imply a judgment regarding the desirability of the sound in question

Process (cont'd)

- Important Subcommittee Protocols
 2. Literature Cited
 - Agreed to rely primarily on published, peer-reviewed literature to support statements of knowledge or uncertainty
 - Agreed to cite gray literature or other sources when Subcommittee members agreed on quality and credibility of the source

Process (cont'd)

- Important Subcommittee Protocols
 3. Scientific Uncertainty vs. Scientific Disagreement
 - Uncertainty refers to those issues that have not been sufficiently studied to draw definitive conclusions
 - Disagreement refers to those issues for which published data, interpretations, and research findings and their consequences contradict or conflict with one another

Process (Cont'd)

Sent draft report for outside review (Doug Wartzok, Randy Reeves, Jim Mead)

- Positive overall response
 - Appropriate for intended audience
 - Comprehensive
 - Specific editorial suggestions
- Revised report based on suggestions for improvements

SUBCOMMITTEE PRODUCT

- **46 pages of text**
- **Covers what is known, what is uncertain and where there is disagreement for the range of topics that are relevant to understanding the impacts of sound**
- **Targets an informed lay audience (esp. Congress)**
- **New sections since Plenary 3:**
 - Science and Scientific Method
 - Strandings & Beaked Whales: Special Considerations
- **No specific Research Recommendations**
 - But did identify list of research needs that “flow” from areas of uncertainty or disagreement in each section

Contents

- I. Introduction
- II. Sources of Sound in the Marine Environment
- III. Sound Fields in the Marine Environment
- IV. Marine Mammals as Receivers of Sound
- IV. Effects of Sound on Marine Mammals
 - A. Physiological Effects
 - B. Behavioral Effects
 - C. Strandings and Beaked Whales
 - D. Population Effects
- V. Effects of Sound on Other Marine Life and Ecosystems
- VI. Cumulative and Synergistic Effects
- VII. Research Needs/Recommendations (?)